

Amendment/Response

Reply to Office Action of January 5, 2006

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (original) A net-aware telephone switch providing IP phone service for a user of a communication terminal, the net-aware telephone switch comprising:
 - a two-line switch connecting with the communication terminal for switching outgoing calls between IP phone mode and PSTN phone mode;
 - a CPU for sending and receiving IP phone mode calls to and from the net-aware telephone switch;
 - storage for storing programs and data required for sending and receiving the IP phone mode calls;
 - an Internet connector for connecting the net-aware telephone switch with the Internet;
 - and
 - a bus for connecting together the two-line switch, the CPU, the storage, and the Internet connector.
2. (original) The net-aware telephone switch of claim 1, further comprising an A/D converter with an analog side connected with the two-line switch and a digital side connected with the bus, for converting telephone signals between analog form suited for the communication terminal and digital form suited for the net-aware telephone switch.
3. (original) The net-aware telephone switch of claim 1, wherein the Internet connector includes an Ethernet card.
4. (original) The net-aware telephone switch of claim 1, wherein the Internet connector includes a broadband modem.
5. (original) The net-aware telephone switch of claim 1, wherein the Internet connector includes a DSL modem.

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6. (original) The net-aware telephone switch of claim 1, wherein the Internet connector includes a wireless modem.
7. (original) The net-aware telephone switch of claim 1, further comprising a display for prompting the user for information.
8. (original) The net-aware telephone switch of claim 1, further comprising a wireless port connected with the bus for receiving data input by the user through an input device.
9. (original) The net-aware telephone switch of claim 8, wherein the wireless port includes an infrared transceiver.
10. (original) The net-aware telephone switch of claim 8, wherein the wireless port includes a Bluetooth transceiver.
11. (original) The net-aware telephone switch of claim 1, wherein the storage further comprises:
 - a parameters setting module, operated by the CPU to direct the user to set parameters for establishing a connection with an Internet service provider and a connection with an Internet telephone provider, and to direct the user to set an indicator indicating IP phone mode;
 - an Internet connecting module, operated by the CPU to establish the connection with the Internet service provider;
 - an IP phone initiating module, operated by the CPU to establish the connection with the Internet telephone provider; and
 - an IP phone conversation module, operated by the CPU to enable the user to talk with a called end in IP phone mode.
12. (original) The net-aware telephone switch of claim 11, wherein a digital certificate is stored in the storage and sent to the Internet telephone provider for authentication.
13. (original) The net-aware telephone switch of claim 11, wherein the parameters include an address of the Internet service provider and an address of the Internet telephone provider.
14. (original) The net-aware telephone switch of claim 13, wherein the parameters further include a first password associated with the Internet service provider and a second password associated with the Internet telephone provider.

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15. (original) The net-aware telephone switch of claim 14, further comprising a smart card reader-writer for storing the parameters into a smart card inserted into the smart card reader-writer.

16. (original) The net-aware telephone switch of claim 15, wherein a digital certificate is stored in the smart card and sent to the Internet telephone provider for authentication.

17. (original) A method for providing IP phone service for a user of a communication terminal, comprising the steps of:

- establishing a connection with an Internet service provider and a connection with an Internet telephone provider;

- receiving an outgoing call signal input by the user through the communication terminal;

- determining whether the outgoing call signal includes information indicating that the outgoing call signal is an IP phone mode call;

- if the outgoing call signal includes information indicating that the outgoing call signal is an IP phone mode call, providing IP phone service for the user through the Internet telephone provider; and

- if the outgoing call signal does not include information indicating that the outgoing call signal is an IP phone mode call, routing the outgoing call signal to a public service telephone network.

18. (original) The method of claim 17, wherein the step of providing IP phone service for the user comprises the steps of:

- converting an analog voice signal associated with the outgoing call signal to a digital voice signal; and

- converting the digital voice signal into TCP/IP packets suitable for Internet transfer.

19. (original) The method of claim 17, further comprising the step of reading parameters for connecting with the Internet telephone provider from a smart card.